

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

This listing of claims will replace all prior versions, and listings, of claims in this application.

LISTING OF CLAIMS:

Claims 1-39 (Cancelled).

Claim 40 (New): An isolated N-acetylglucosamine-1-phosphotransferase comprising an  $\alpha$ -subunit, a  $\beta$ -subunit and a  $\gamma$ -subunit, wherein the  $\alpha$ -subunit comprises an amino acid sequence that is at least 70% identical to SEQ ID NO:1, the  $\beta$ -subunit comprises an amino acid sequence that is at least 70% identical to SEQ ID NO:2, and the  $\gamma$ -subunit comprises an amino acid sequence that is at least 70% identical to SEQ ID NO:3.

Claim 41 (New): The isolated N-acetylglucosamine-1-phosphotransferase of Claim 40, wherein the  $\alpha$ -subunit comprises the amino acid sequence of SEQ ID NO:1.

Claim 42 (New): The isolated N-acetylglucosamine-1-phosphotransferase of Claim 40, wherein the  $\beta$ -subunit comprises the amino acid sequence of SEQ ID NO:2.

Claim 43 (New): The isolated N-acetylglucosamine-1-phosphotransferase of Claim 40, wherein the  $\gamma$  subunit comprises the amino acid sequence of SEQ ID NO:3.

Claim 44 (New): A composition comprising the isolated N-acetylglucosamine-1-phosphotransferase of Claim 40 and a carrier.

Claim 45 (New): A composition comprising the isolated N-acetylglucosamine-1-phosphotransferase of Claim 41 and a carrier.

Claim 46 (New): A composition comprising the isolated N-acetylglucosamine-1-phosphotransferase of Claim 42 and a carrier.

Claim 47 (New): A composition comprising the isolated N-acetylglucosamine-1-phosphotransferase of Claim 43 and a carrier.

Claim 48 (New): An isolated polypeptide, which comprises an amino acid sequence that is at least 70% identical to SEQ ID NO:1 and has the activity of a biologically active  $\alpha$ -subunit of N-acetylglucosamine-1-phosphotransferase.

Claim 49 (New): The isolated polypeptide of Claim 48, which comprises SEQ ID NO:1.

Claim 50 (New): A composition comprising the isolated polypeptide of Claim 48 and a carrier.

Claim 51 (New): A composition comprising the isolated polypeptide of Claim 49 and a carrier.

Claim 52 (New): An isolated polypeptide, which comprises an amino acid sequence that is at least 70% identical to SEQ ID NO:2 and has the activity of a biologically active  $\beta$ -subunit of N-acetylglucosamine-1-phosphotransferase.

Claim 53 (New): The isolated polypeptide of Claim 52, which comprises SEQ ID NO:2.

Claim 54 (New): A composition comprising the isolated polypeptide of Claim 53 and a carrier.

Claim 55 (New): A composition comprising the isolated polypeptide of Claim 53 and a carrier.

Claim 56 (New): An isolated polypeptide, which comprises an amino acid sequence that is at least 70% identical to SEQ ID NO:3 and has the activity of a biologically active  $\gamma$ -subunit of N-acetylglucosamine-1-phosphotransferase.

Claim 57 (New): The isolated polypeptide of Claim 56, which comprises SEQ ID NO:3.

Claim 58 (New): A composition comprising the isolated polypeptide of Claim 56 and a carrier.

Claim 59 (New): A composition comprising the isolated polypeptide of Claim 57 and a carrier.

Claim 60 (New): A composition comprising an isolated polypeptide which comprises an amino acid sequence that is at least 70% identical to SEQ ID NO:1 and has the activity of

a biologically active  $\alpha$ -subunit of N-acetylglucosamine-1-phosphotransferase; and an isolated polypeptide which comprises an amino acid sequence that is at least 70% identical to SEQ ID NO:2 and has the activity of a biologically active  $\beta$ -subunit of N-acetylglucosamine-1-phosphotransferase.

Claim 61 (New): The composition of Claim 60, which comprises SEQ ID NO:1 and SEQ ID NO:2.

Claim 62 (New): The composition of Claim 60, further comprising a carrier.

Claim 63 (New): An isolated N-acetylglucosamine-1-phosphotransferase which has a specific activity of at least  $10^6$  pmol/h/mg.

Claim 64 (New): The isolated N-acetylglucosamine-1-phosphotransferase of Claim 63 which has a specific activity of at least  $5 \times 10^6$  pmol/h/mg.

Claim 65 (New): The isolated N-acetylglucosamine-1-phosphotransferase of Claim 63 which has a specific activity of at least  $12 \times 10^6$  pmol/h/mg.

Claim 66 (New): A composition comprising the isolated N-acetylglucosamine-1-phosphotransferase of Claim 63 and a carrier.

Claim 67 (New): A composition comprising the isolated N-acetylglucosamine-1-phosphotransferase of Claim 64 and a carrier.

Claim 68 (New): A composition comprising the isolated N-acetylglucosamine-1-phosphotransferase of Claim 65 and a carrier.